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(54) POLYMER MICELLES INCLUDING WATER SOLUBLE MEDICINE

(57)Abstract:

PROBLEM TO BE SOLVED: To obtain polymer micelles practically excluding polymer micelles flocculated each other by mixing a specific copolymer and a sparingly water soluble medicine in a water miscible organic solvent, dialyzing through a dialysis membrane to water, sonicating to enable effectively enclosing sparingly water soluble medicine in polymer micelles.

SOLUTION: This polymer micelles is obtained by mixing (A) in the organic water miscible solvent such as dimethylformamide or the like, (B) the block copolymer having a hydrophobic polymer segment and a polyoxyethylene segment as the hydrophilic polymer segment, and (C) the sparingly water soluble medicine (preferably, camptothecin or the like), forming polymer micelles including medicine by dialyzing the mixture into water through the dialysis membrane, then sonicating the solution or dispersion including the polymer micelles. The component (B) is preferably a polymer expressed by formula (1) (R1 is H or the like; R2 is H or the like; L1 is -NH- or the like; R is H or the like; n is 4 to 2,500; x+y is 2 to 300) or the like.



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